



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,158	10/24/2003	Shankar Pal	MSFT-2851/306821.01	1679
23377 7590 11/15/2007 WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER BELL, CORY C	
			ART UNIT 2164	PAPER NUMBER
			MAIL DATE 11/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/693,158

Applicant(s)

PAL ET AL.

Examiner

Cory C. Bell

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-9 and 11-17 is/are pending in the application. 11-14, 16-17
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed. 16-17
- 6) ☒ Claim(s) 1-3, 5-9, 11-14, and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-3, 5-9, 11-14, and 16-17 have been examined

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 11, and 16 are rejected under 35 U.S.C. 112 2nd paragraph as they depend from canceled claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 5-9, 11-14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,721,727, hereafter known as Chau, in view of the applicant admitted prior art[AAPA](Applicants background paras 3-21) or "XML and ASP.NET", and in view of "Introduction to XML Schema" or "Describing your Data: DTDs and XML Schemas."

Claim 1 is rejected for the following reasons:

defining another class in managed code that represents an XML data type;
defining at least one of the plurality of fields defines of the user defined type, as having the XML data type,(Chau Col 7 lines 8-12 teach having an XML user defined type, Applicants background para 6 and XML and ASP.Net XML Schema Definition Tool (xsd.exe)teach that User defined types are defined in a class in managed code,)
and defining at least one other of said plurality of fields as having a different data type(Applicants background discusses fields of data types different the XML see figure 1, also see Chau figure 3 and XML and ASP.NET Figure 4.17); and instantiating the class defining the user defined type to create an object of the user defined type, wherein the object holds XML data in said at least one field and holds data of said different data type in said at least one other field;
and persisting the object within the database store(Applicants background paras 18 and 19, and).

Chau teaches the use of XML User defined types, but is not explicit to the instantiating of objects, however the AAPA and XML and ASP.net show that these methods were known in the art(See Mapping above) Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use that applicant admitted prior art system in conjunction with Chau, as it allows for compliance with a well known database system

Art Unit: 2164

The limitation of the XML data field having an associated XML Schema that defines a content model for the XML data in the field (Col 12 line 56- Col 13 line 49, teaches an XML schema (the DAD/DTD) Col 40-49 teaches the documents association with the mapping thus making the dtd associated with the fields), however, it does not expressly disclose XML Schema. However, Introduction to XML Schema and Describing your Data teach that the XML Schema content model is designed to be a replacement for DTDs and thus it would have been obvious to replace the DTDs with XML Schemas to comply with current practices, as well as having the predictable result of a content model being defined by an XML Schema. See MPEP 2143[R-6].

Claim 2 is rejected for the following reasons:

The method recited in claim 1, wherein the managed code class that represents the XML data type comprises at least one constructor (Chau Col 8 lines 36-41 composing a XML document into a relational table is inherently done by a constructor) and at least one method that returns an object through which the XML data in the field of the persisted instance of the user defined type can be retrieved (Chau Col 8 lines 36-41 composing an XML document, the returned object, from the relational table). (AAPA, para 19 and XML and ASP.NET)

Claim 3 is rejected for the following reasons:

The method recited in claim 1, further comprising adding a method to the managed code class definition of the user defined type to implement behavior on the field of the user defined type that is defined as an instance of the managed code class that represents the XML data type (Col 8 lines 1-4 shows that the columns can have user defined functions (or behaviors using the broadest reasonable interpretation) associated with the columns) (Also see AAPA para 19).

Claim 5 is rejected for the following reasons:

The method recited in claim 4, wherein said associating step comprises annotating the managed code class definition of the user defined type with an attribute that identifies the XML Schema on a server that hosts the database store (Col 40-49 teaches the DTDID and that this attribute must be specified, hence it is annotated, to provide the XML User Defined Type Col 9 lines 1-9 teach the DTDs being stored in a table and they are thus part of the server) and as discussed above the AAPA and XML and ADO.NET teach defining the User defined type in a class in managed code.

Claim 6 is rejected for the following reasons:

The method recited in claim 1, further comprising at least one of the steps of: querying an instance of the user-defined type persisted within the database store (Col 44 lines 37-44); and modifying an instance of the user-defined type persisted within the database store.

Claim 7, as best understood, is rejected for the following reasons: See Claim 1 Rejection

Art Unit: 2164

Claim 8 is rejected for the following reasons: See claim 2 rejection.

Claim 9 is rejected for the following reasons: See claim 3 rejection.

Claim 11 is rejected for the following reasons: See Claim 5 rejection.

Claim 12 is rejected for the following reasons: See Claim 1 rejection.

Claim 13 is rejected for the following reasons: See claim 2 rejection.

Claim 14 is rejected for the following reasons: See claim 3 rejection.

Claim 16 is rejected for the following reasons: See Claim 5 rejection.

Claim 17 is rejected for the following reasons: See Claim 6 rejection.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cory C. Bell whose telephone number is (571) 272 2736. The examiner can normally be reached on m-f 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272 4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



SAM RIMELL
PRIMARY EXAMINER